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MUSCI AND HEPATICAE OF WASHINGTON, D. C., AND VICINITY.

JOHN M. HOLZINGER.

It was the writer's fortune to work for three years, from 1891 to 1893, in the Agricultural Department at our national capital, as an assistant botanist. During that time I spent most of my leisure hours in exploring the vicinity of Washington for mosses, and, incidentally also for Hepaticae. The determination of the Hepaticae was entrusted entirely to Dr. A. W. Evans. The mosses I tried to work out myself, but, being a novice, I encountered many difficulties, so I sent my determinations and doubtful materials to my friend Mr. Jules Cardot, who has thus seen and corrected practically all the species recorded below. Besides, in the fifteen years that have elapsed, special students have studied the material collected by me; Mr. Cheney, the genus *Amblystegium*; Dr. Best, *Leskea* and *Thuidium*; Dr. Grout, *Eurhynchium* and *Brachythecium*; Mrs. Britton, *Sematophyllum*, *Orthotrichum*, etc. So that now, as a matter of fact, I can claim only the collecting and final recording of most species, for future reference.

During my study in Washington I endeavored, naturally, to make use of previous work of moss students. Only two persons seemed then to have worked on mosses, and to have left a record; the first was Mr. Rudolph Oldberg, a young druggist, a Scandinavian; the other, a Rev. E. Lehnert. Mr. Oldberg's work was recorded in "The Guide to the Flora of Washington," published by Prof. F. L. Ward as Bulletin No. 26 of the U. S. National Museum, in 1881. In this Guide ninety eight Musci and twenty-nine Hepaticae are listed. Mr. Lehnert's work is recorded in Prof. B. F. Knowlton's "Additions to the Flora of Washington and Vicinity, from April 1, 1884, to April 1, 1886," published in the proceedings of the Biological Society of Washington, Vol. III, 1884-1886. Here one hundred and seventy-nine Musci and fifty-seven Hepaticae are listed. This second list is called a "revision," "so kindly placed" at Prof. Knowlton's disposal by Mr. Lehnert, and the author proudly points out that Mr. Oldberg's list is here augmented "by the addition of one hundred and eleven species, of which eighty-three are Frondosi and twenty-eight Hepaticae, making a total of two hundred and thirty-eight species."

Naturally I made use also of the collection of mosses in the National Herbarium, for purposes of comparison. So generally did I miss here the species recorded in the two lists named above that I made a systematic comparison between these lists and the species actually represented. After thus looking for the first forty-five species listed in Mr. Lehnert's "Revision" I confess I lost patience; for in this number I found only twelve of Mr. Oldberg's collection and none at all of Mr. Lehnert's. I then searched for Mr. Oldberg himself, and found he had died some years before. Mr. Lehnert, however, was alive, over in Philadelphia. With him I had some correspondence, without definite result; for he could never furnish me material of species he had reported. My friend Knowlton doubtless was serious—he was a serious man—when he published "Additions from April 1, 1884, to April 1, 1886;" as regards this revision of the District mosses, it proved to be a real April first

joke, without any scientific basis whatever. Even Mr. Oldberg's report was supported in so meager a way, by only about one-fourth of the species listed, that I decided then and there on supplying as a first foundation for future work on the District mosses, a *list accompanied by specimens* deposited in the National Herbarium. For only on this basis can rational work be done in the future.

The preparation of this list has been long delayed, owing to bread-winning duties. The great distance at which I live from Washington since 1893 (at Winona, Minn.) has been one serious drawback. Fortunately Prof. Edward B. Chamberlain, for some years till recently a teacher in one of the Washington schools, has taken much interest in the District mosses, and has with much sacrifice of time, collected for my use data from the National Herbarium which I could not otherwise have obtained. To him and all my other bryological friends who have in one way or another aided in determining and elaborating this collection, I wish here to express my heartfelt gratitude.

The list here offered for publication, is supported by material deposited in the National Herbarium and mostly also in my private herbarium, for every species cited. It is dedicated to future moss students with the earnest wish that in their study they may experience the same humble joy felt by the author in preparing it.

ALPHABETICAL LIST OF SPECIES OF MUSCI.

1. AMBLYSTEGIUM ADNATUM (Hedw.) Aust. Banks of Potomac.
2. " JURATZKANUM Sch. Agricultural Department grounds; Bladensburg Road.
3. AMBLYSTEGIUM KOCHII B. & S. Agricultural Department grounds.
4. " LESCURI (Sulliv.) Aust. Banks of Potomac.
5. " ORTHOCLADON L. & J. Rock Creek; Fourteenth street extended; Glen Echo; Cabin John's; road to Sligo.
6. AMBLYSTEGIUM RIPARUM (Hedw.) B. & S. Great Falls of the Potomac.
7. " SERPENS (Hedw.) B. & S. Rock Creek; Bladensburg Road.
8. " VARIUM Lindb., represented by various forms. Agricultural Department grounds; Glen Echo; Kendall Green; Rock Creek; Soldiers' Home grounds.
9. ANACAMPTODON SPLACHNOIDES (Froehl.) Brid. Spencerville, Maryland.
10. ANOMODON ATTENUATUS (Schreb.) Huebn. Glen Echo.
11. " MINOR Fuernr. Rock Creek.
12. " ROSTRATUS (Hedw.) Sch. Rock Creek.
13. " TRISTIS (Ces.) Sulliv. (*Leskea tristis*) Rock Creek.
14. AULACOMNIUM HETEROSTICHUM (Hedw.) B. & S. Arlington.
15. BARBULA CAESPITOSA (Schwaegr.) Schultz. Rock Creek; Glen Echo; Mt. Vernon; Ingleside; Brightwood; Spencerville, Maryland.
16. BARBULA UNGUICULATA Hedw. Rock Creek (a form); Arlington.
17. BARTRAMIA POMIFORMIS Hedw. Rock Creek.
18. BRACHYTHECIUM ACUMINATUM (Hedw.) Kindb. Rock Creek; Spencerville, Maryland.

19. BRACHYTHECIUM ACUTUM (Mitt.) Sulliv. Rock Creek.
20. " OYXCLADON (Brid.) Jaeg. & Sauerb. (*Brachythecium laetum* Brid.) Arlington; Rock Creek; Soldiers' Home grounds.
21. BRACHYTHECIUM PLUMOSUM (Sw.) B. & S. Rock Creek; banks of the Potomac.
22. BRACHYTHECIUM RUTABULUM (L.) B. & S. Glen Echo; Cabin John's.
23. BRUCHIA FLEXUOSA (Schwaegr.) C. M. Spencerville, Maryland.
24. BRYHNIA NOVAE-ANGLIAE (Sulliv. & Lesq.) Grout in Bull. Torr. Bot. Club, May, 1898 p. 229. (*Brachythecium Novae-Angliae*; *Eurhynchium Novae-Angliae*). The tenability of this genus has been questioned. Rock Creek; District of Columbia (collected Coville).
25. BRYUM ARGENTEUM L. Arlington.
26. " CAESPITICIMUM L. Agricultural Department grounds.
27. " CIRRATUM Hoppe & Hornsch. Bladensburg Road.
28. CATHARINEA ANGUSTATA Brid. (*Atrichum angustatum* (Brid.) B. & S.) Rock Creek.
29. CATHARINEA UNDULATA W. & M. (*Atrichum undulatum* (L.) P. B.) Rock Creek.
30. CERATODON MINOR Aust. (Det. Mrs. E. G. Britton). Rock Creek.
31. CERATODON PURPUREUS (L.) Brid. Rock Creek; Bladensburg Road.
32. CIRRIPHYLLUM BOSCHII (Schwaegr.) Grout in Bull. Torr. Bot. Club, 1898, p. 226.
(*Eurhynchium Boschii* (Schwaegr.) Jaeg.). Rock Creek.
33. CLIMACIUM AMERICANUM Brid. Rock Creek.
34. CLIMACIUM AMERICANUM KINDBERGII R. & C. in Bot. Gaz., 1890, p. 59.
See also THE BRYOLOGIST, 1901, p. 54, and 1906, p. 8. Rock Creek.
35. CRYPHAEA GLOMERATA B. & S. Rock Creek.
36. DICRANELLA HETEROMALLA (L.) Sch. Ingleside; Catholic University grounds; Rock Creek.
37. DICRANELLA HETEROMALLA ORTHOCARPA (Hedw.) L. & J. (= *Dicranella Fitzgeraldii* R. & C., fide Cardot in Bull. Herb. Boiss. Vol. 7, No. 4, and *Dicranella Fitzgeraldi* R. & C. in Bot. Gaz. 1888, p. 197). Rock Creek.
38. DICRANELLA RUFESCENS (Turn.) Sch. Mixed with *Ditrichum tortile*. Rock Creek.
39. DICRANELLA VARIA (Hedw.) Sch. Glen Echo.
40. DICRANUM FLAGELLARE Hedw. Rock Creek.
41. DICRANUM FULVUM Hook. Rock Creek.
42. DICRANUM SABULETORUM R. & C. in Bot. Gaz. 1889, p. 91, T. 12 A. Rock Creek.
43. DICRANUM SCOPARIUM (L.) Hedw. Spencerville, Maryland.
44. DICRANUM SCOPARIUM PALLIDUM (Müll.) L. & J. Rock Creek.
45. DITRICHUM PALLIDUM (Schrader) Hpe. Rock Creek.
46. DITRICHUM TORTILE (Schreb.) Brockm. Rock Creek.
47. DITRICHUM TORTILE PUSILLUM (Timm) Brock. Rock Creek.
48. DITRICHUM TORTILE var. A peculiar variety with leaf margins of two cell

- layers and strongly serrate. The costa also is toothed toward the apex. Rock Creek.
49. DITRICHUM VAGINANS (Sulliv.) Hpe. Cabin John's: Glen Echo; Rock Creek.
 50. DIPHYSCIUM SESSILE (Schmid) Lindb. (*Diphyscium foliosum*) Rock Creek; Fourteenth street.
 51. DRUMMONDIA CLAVELLATA (Dill.) Hook. Rock Creek.
 52. ENTODON CLADORHIZANS (Hedw.) Par. (*Cylindrothecium cladorrhizans*) Glen Echo.
 53. ENTODON COMPRESSUS C. M. in Linn. 1844, p. 707. (*Cylindrothecium compressum*). Arlington.
 54. ENTODON SEDUCTRIX (Hedw.) C. M. in Linn, 1847, p. 214. (*Cylindrothecium seductrix*). Rock Creek.
 55. EURHYNCHIUM GRAMINICOLOR (Brid.) Par. Index ed. 1. 1894, R. & C. in Bull. Herb. Boiss. 1899, p. 325. *Bryhnia graminicolor* (Brid.) Grout in Bull. Torr. Club, 1898, May, p. 231. (*Hyphnum Sullivantii* Spruce). Rock Creek.
 56. EURHYNCHIUM GRAMINICOLOR HOLZINGERI (R. & C.) Par. Index ed. 1, 1894. *Bryhnia graminicolor Holzingeri* (R. & C.) Grout in Bull. Torr. Bot. Club, 1898, May, p. 232. District of Columbia (collected Coville).
 57. EURHYNCHIUM HIANIS (Hedw.) Lindb. 1871. Rock Creek Park.
 58. EURHYNCHIUM PRAELONGUM (Dill. L.) Bryhn. A pale pinnate form. Dr. Grout has pencilled "No" on the pocket, but does not say what it is. Arlington: District of Columbia.
 59. EURHYNCHIUM STRIGOSUM ROBUSTUM Roell in Hedwigia, 36: 52, 1897. Rock Creek.
 60. EURHYNCHIUM STRIGOSUM SCABRISSETUM Grout. Bull. Torr. Club, May, 1898, p. 241. Along Potomac, Georgetown, D. C. (collected J. Blanchard).
 61. FISSIDENS DECIPIENS De Not. Spencerville, Maryland.
 62. FISSIDENS INCURVUS Starke. Near the greenhouse of the Department of Agriculture.
 63. FISSIDENS MINUTULUS Sulliv. Rock Creek Park.
 64. FISSIDENS PUSILLUS (Wils.) Milde. Rock Creek; Potomac valley; Glen Echo.
 65. FISSIDENS TAXIFOLIUS (L.) Hedw. Rock Creek; Soldiers' Home grounds; River View; Spencerville, Maryland.
 66. FONTINALIS BIFORMIS Sulliv. Rock Creek; Blagden's Run; Creek near Arlington.
 67. FONTINALIS NOVAE-ANGLIAE Sulliv. Creek near Arlington.
 68. FORSTROEMIA TRICHOMITRIA (Hedw.) Lindb. (*Leptodon trichomitrium*). Ingleside.
 69. FUNARIA HYGROMETRICA (L.) Hedw. Arlington.
 70. GRIMMIA OLNEYI Sulliv. Great Falls, Maryland.
 71. GRIMMIA PILIFERA P. B. (*Grimmia pennsylvanica* Schwaegr.) Glen Echo (collected E. B. Chamberlain).

72. HEDWIGIA ALBICANS VIRIDIS (B. & S.) Limpr. (*Hedwigia ciliata viridis*). Rock Creek.
73. HOMALOTHECIELLA SUBCAPILLATA (Hedw.) Card. in THE BRYOLOGIST, March, 1904, p. 31. *Homalotheciella* * Card. in Bull. Herb. Boiss. Vol. 7, p. 374, 1890. *Burnettia* Grout in THE BRYOLOGIST, July, 1903, p. 65. (*Homalothecium subcapillatum*) Rock Creek; Brightwood; Arlington; Great Falls, Maryland.
74. HYPNUM ARCUATUM Lindb. (*Hypnum patientiae*). Road to Sligo.
75. HYPNUM CHRYSOPHYLLUM Brid. Rock Creek.
76. HYPNUM (LIMNOBIUM) CLOSTERI Aust. See Cheney, N. Am. Species of Amblystegium in Bot. Gaz. Oct., 1897, p. 241, where *Amblystegium Holzingeri* R. & C. is reduced to *Hypnum Closteri*. In a ravine on the Virginia side of the Potomac, above the Georgetown Bridge.
77. HYPNUM CURVIFOLIUM Hedw. Rock Creek; Arlington; Blagden's Run.
78. HYPNUM FERTILE Sendt. Rock Creek.
79. HYPNUM HISPIDULUM Brid. Road to Sligo; Mt. Pleasant; Arlington. (On this plant there are papillae on the under surface of the leaves.)
80. HYPNUM POLYGAMUM Sch. Arlington.
81. HYPNUM REPTILE Rich. Rock Creek.
82. ISOPTERYGIUM MICANS (Sw.) E. G. Britton in THE BRYOLOGIST, July, 1902, p. 67. (*Raphidostegium micans*; *Plagiothecium micans*) Rock Creek.
83. LEPTOBRYUM PYRIFORME (L.) Sch. Rock Creek.
84. LESKEA ARENICOLA Best in THE BRYOLOGIST, Nov., 1903, p. 97, reprinted from Bull. Torr. Bot. Club, Sept., 1903. Spencerville, Maryland.
85. LESKEA GRACILESCENS Hedw. Arlington.
86. LESKEA OBSCURA Hedw. Rock Creek.
87. LESKEA POLYCARPA Ehrh. Banks of the Potomac.
88. LEUCOBRYUM GLAUCUM (L.) Sch. Catholic University grounds.
89. LEUCOBRYUM MINUS Hpe. Rock Creek; Bladensburg Road.
90. LEUCODON JULACEUS (L.) Sulliv. Rock Creek; Spencerville, Maryland.
91. MNIMUM AFFINE Bland. Glen Echo; Road to Sligo.
92. MNIMUM CUSPIDATUM (L. ex. p., Schreb.) Leyss. Arlington; Rock Creek; Cabin John's.
93. MNIMUM PUNCTATUM (L., Schreb.) Hedw. Rock Creek; Banks of the Potomac.
94. MNIMUM STELLARE Reich. Rock Creek.
95. NECKERA PENNATA (L.) Hedw. Spencerville, Maryland.
96. ORTHOTRICHUM BRAUNII B. & S. Rock Creek.
97. ORTHOTRICHUM SCHIMPERI Hamm. (*Orthotrichum fallax* Sch.); Soldiers' Home grounds.
98. ORTHOTRICHUM CUPULATUM Hoffm. (*Orthotrichum strangulatum* P. B.). Spencerville, Maryland.
99. ORTHOTRICHUM OHIOENSE Sulliv. Rock Creek.
100. PHASCUM CUSPIDATUM Schreb. var. Agricultural Department grounds.

*See Note Page 91.

101. PHILONOTIS FONTANA (L.) Brid., "a lax form," Card. Rock Creek.
102. PHYSCOMITRIUM TURBINATUM (Rich.) C. M. Agricultural grounds.
103. PLAGIOTHECIUM DENTICULATUM (L.) B. & S. Alexandria, Virginia.
104. PLAGIOTHECIUM ROESEANUM (Hpe.) B. & S. (*Plagiothecium Sullivantiae* B. & S.) Rock Creek; Banks of the Potomac; Fourteenth Street extended.
105. PLAGIOTHECIUM REPENS (Brid.) B. & S. Rock Creek.
106. PLEURIDIUM ALTERNIFOLIUM (Dicks., Kaulf.) Brid. Agricultural Department grounds; Arlington Road.
107. PLEURIDIUM SUBULATUM (Huds.) Rabenh. Rock Creek; Tenallytown.
108. POGONATUM BREVICAULE (Brid.) P. B. East Washington Electric Railway Line.
109. POLYTRICHUM COMMUNE L. Rock Creek.
110. POLYTRICHUM OHIOENSE R. & C. Rock Creek; Spencerville, Maryland.
111. "POTTIA TRUNCATA"—a doubtful reference. Rock Creek Park.
112. PTYCHOMITRIUM INCURVUM (Schwaegr.) Sulliv. Rock Creek.
113. PYLAISIA INTRICATA (Hedw.) Card. (non Sch.) in Bull. Herb. Boiss. Vol. 7, No. 4, 1899, p. 373. (*Pylaisia velutina* Sch.). Spencerville, Maryland.
114. PYLAISIA SCHIMPERI Card. in loc. cit. (*Pylaisia intricata* Sch.). Rock Creek; Arlington; Fourteenth Street extended.
115. PYLAISIA SUBDENTICULATA B. & S. Rock Creek; Spencerville, Maryland.
116. RHYNCHOSTEGIUM DEPLANATUM Sch. Banks of the Potomac.
117. RHYNCHOSTEGIUM GEOPHILUM Aust. Rock Creek.
118. RHYNCHOSTEGIUM RUSCIFORME (Weiss) B. & S. Broad Branch of Rock Creek.
119. RHYNCHOSTEGIUM SERRULATUM (Hedw.) Jaeg. Rock Creek; Bay Ridge, River View; Banks of the Potomac; Soldiers' Home grounds; Sligo; Agricultural Department grounds.
120. SCHISTIDIUM APOCARPUM (L.) B. & S. District of Columbia (collected Coville).
121. SEMATOPHYLLUM ADNATUM (Mx.) E. G. Britton in THE BRYOLOGIST, July, 1902, p. 65 (*Rhaphidostegium microcarpon*). Bay Ridge.
122. SEMATOPHYLLUM CAROLINIANUM (C. M.) E. G. B., in loc. cit. (*Rhaphidostegium demissum Carolinianum*). Rock Creek.
123. SEMATOPHYLLUM MARYLANDICUM (C. M.) E. G. B., in loc. cit. (*Rhaphidostegium demissum Marylandicum*). Rock Creek; Virginia side of the Potomac.
124. SPHAGNUM CYMBIFOLIUM LAEVE Warnst. (*Sphagnum cymbifolium* forma *glaucescens*). Rock Creek Park.
125. SYSTEGIUM CRISPUM (Hedw.) Sch. (*Astomum crispum*). Soldiers' Home grounds.
126. SYSTEGIUM SULLIVANTII (B. & S.) Jaeg. (*Astomum Sullivantii*). Agricultural Department grounds.
127. THELIA ASPRELLA Sulliv. Rock Creek; River View; Spencerville, Maryland.

128. *THELIA HIRTELLA* (Hedw.) Sulliv. Arlington.
129. *THUIDIUM DELICATULUM* (L.) Mitt. Banks of the Potomac.
130. *THUIDIUM MICROPHYLLUM* (Sw.) Best in Bull. Torr. Bot. Club, March 1896, p. 88. (*Thuidium gracile*). Agricultural Department grounds; Rock Creek; Ingleside; Mt. Pleasant; Spencerville, Maryland.
131. *THUIDIUM RECOGNITUM* (Hedw.) Lindb. Rock Creek; Cabin John's.
132. *THUIDIUM SCITUM* (P. B.) Aust. Glen Echo; Rock Creek.
133. *THUIDIUM VIRGINIANUM* (Brid.) Lindb. (*Thuidium gracile Lancasteriense*). See THE BRYOLOGIST, Oct., 1901, p. 73, and Bull. Torr. Bot. Club, March, 1896. Rock Creek.
134. *TORTULA MURALIS* (L.) Hedw. Georgetown; grounds around Washington's Church, Alexandria, Virginia.
135. *ULOTA CRISPULA* Bruch. in Brid. Bryol. Univ. Spencerville, Maryland.
136. *ULOTA AMERICANA* (P. B.) Mitt. (*Ulota Hutchinsiae*). North Washington, D. C.; Spencerville, Maryland.
137. *WEBERA LESCURIANA* L. & J. Rock Creek.
138. *WEBERA NUTANS* (Schreb.) Hedw. Rock Creek; Glen Echo; Arlington.
139. *WEISIA VIRIDULA* (L.) Hedw. Arlington; Glen Echo; Fourteenth Street extended; Agricultural Department grounds.

*Dr. George B. Sudworth, to whom I referred this nomenclature problem for verification, disposed of it as follows: "If Homalothecium is untenable, then Cardot's so-called sections, Euhomalothecium and Homalotheciella, are valid; and in casting Homalothecium sp. into synonymy, the section name Euhomalothecium must stand *first*, and Homalotheciella *second*, should the former ever have to be replaced on account of any invalidity shown to exist. This is so, because a section name is, in fact, a sub-generic name, and like a sub-specific name, is raised to specific rank, and may at any time of necessity (and if Homalothecium be untenable, this is a case of necessity) be raised to generic rank. This cuts out a section name, but if the latter is really wanted a new one may be created. Grout's position in passing over these two section names of Cardot's is unsupported by any authority I know. His Burnettia must certainly fall before either of Cardot's section names."

ALPHABETICAL LIST OF SPECIES OF HEPATICAE.

The following species of Hepatics were collected by me in and near the District of Columbia and were determined by Dr. Alexander W. Evans.

1. *ARCHILEJEUNIA CLYPEATA* (Schwein.) Schiffn. District of Columbia.
2. *BAZZANIA TRILOBATA* (L.) S. F. Gray. Rock Creek.
3. *CEPHALOZIA CURVIFOLIA* (Dicks) Dumort. Spencerville, Maryland.
4. *FRULLANIA EBORACENSIS* Gottsche. Banks of the Potomac opposite Georgetown; Rock Creek; Spencerville, Maryland.
5. *FRULLANIA ASAGRAYANA* Mont. Blagden's Run.
6. *FRULLANIA SQUARROSA* (R. Bl. & Nees) Dumort. Rock Creek.
7. *JUNGERMANNIA PUMILA* With. Banks of the Potomac opposite Georgetown.
8. *KANTIA* sp. Rock Creek.

9. *LEJEUNIA CALCAREA* Libert. Rock Creek.
10. *LOPHOCOLEA HETEROPHYLLA* (Schrad.) Dumort. Rock Creek.
11. *METZGERIA CONJUGATA* Lindb. Rock Creek.
12. *NARDIA CRENULATA* (Smith) Lindb. Rock Creek.
13. *NARDIA HYALINA* (Lyell.) Carringt. Banks of the Potomac opposite Georgetown.
14. *ODONTOSCHISMA DENUDATUM* (Mart.) Dumort. Rock Creek.
15. *ODONTOSCHISMA SPHAGNI* (Dicks.) Dumort. District of Columbia; Spencerville, Maryland.
16. *RADULA OBCONICA* Sulliv. Rock Creek.
17. *RADULA TENAX* Lindb. Rock Creek.
18. *SCAPANIA EVANSII* Bryhn. Rock Creek.
19. *SCAPANIA MEMOROSA* (L.) Dumort. Arlington; East Washington; Rock Creek. Winona, Minn.

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The following named books, from the library of the late Prof. Clara E. Cummings, are offered for sale. The prices are net:

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| 1 | <i>Lichens Exotici.</i> A. M. Hue. Paris. 1892..... | \$10 00 |
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| 3 | <i>Die Bedingungen der Fortpflanzung bei Einigen Algen und Pilzen.</i>
Dr. Geo. Klebs. Jena, 1896..... | 3 50 |
| 4 | <i>A Preliminary Catalogue of the Plants Growing on Mount Desert and the Adjacent Islands.</i> E. L. Rand and J. H. Redfield. 1894.... | 25 |
| 5 | <i>Lehrbuch der Botanik für Hochschulen.</i> By Strasburger, Noll,
Schenck, Schimper. Jena, 1895.... | 2 00 |
| 6 | <i>Handbuch der Systematischen Botanik.</i> Dr. Chas. Luerssen. 1879. | 3 00 |
| 7 | <i>Illustriertes Pflanzenleben.</i> Dr. Arnold Dodel-Port. Zurich, 1883. | 1 00 |
| 8 | <i>Monographia Roccelleorum. Ein Beitrag zur Flechtensystematik.</i>
Otto Vernon Darbishire. Stuttgart, 1898..... | 10 00 |
| 9 | <i>Flechtenstudien.</i> Hugo Zukal, 1884 .. . | 1 50 |
| 10 | <i>British Lichens. Part I.</i> Rev. James M. Crombie, 1861..... | 4 00 |
| 11 | <i>Geschichte und Litteratur der Lichenologie.</i> 2 Vols August von
Krempellhuber. München, 1867..... | 2 00 |
| 12 | <i>Lichenum Helveticorum.</i> L. E. Schaerer. Bernae, 1823-1838.... | 3 00 |
| 13 | <i>Enumeratio Critica Lichenum Europaeorum.</i> L. E. Schaerer.
Bernae, 1850 .. . | 1 50 |
| 14 | <i>Systema Lichenum Germaniae.</i> Dr. S. W. Koerber. Breslau, 1855.. | 2 00 |
| 15 | <i>Methodus qua Omnes Detectos Lichenes.</i> Erick Acharius. 1803.. | 2 00 |
| 16 | <i>Flora Cestricea. An Herborizing Companion for the Young Botan-
ists of Chester County, Pa.</i> Wm. Darlington. 1853..... | 3 00 |
| 17 | <i>Introduction to Elementary Practical Biology.</i> Chas. W. Dodge.
Harper Bros., 1894. | 1 00 |
| 18 | <i>A Laboratory Manual of High School Botany.</i> Frederick E. Clem-
ents. The University Publishing Co. 1900..... | 50 |